



REMARKS

Applicant has carefully reviewed and considered the Office Action mailed on December 13, 2002, and the documents cited therewith. Claims 6, 9, 11-12, 15, 20, 22 and 24 are amended, claims 8 and 19 are canceled, and claims 25-28 are added. As a result, claims 1-7, 9-18, and 20-28 are now pending in this application. Moreover, Applicant does not admit that the cited references are prior art and reserves the right to “swear behind” each of the cited references as provided under 37 C.F.R. 1.131.

§102 Rejection of the Claims

Claims 1-24 were rejected under 35 USC § 102(e) as being anticipated by Kohn et al. (U.S. 5,963,447). Applicant respectfully traverses this rejection.

Claim 1 recites “annotating one or more actions in the production recipe with a desired intention for the action.” (emphasis added). In the “Response to Arguments” section, the Office Action cited a number of different citations within the specification that describes different embodiments of annotations. Further, the Office Action indicated that

To one of ordinary skill in the art and using a broad view of annotation, each agent in a multiple agent architecture is annotated in a manner that satisfies the above description such that and in a dynamic sense, in the prior art of Kohn, adjusts in an intelligent manner in real time to a nonlinear process. Kohn, with intelligent agents, has annotated fully the production recipe (Kohn, col. 1, lines 9-15). Without such annotation (intention of operation), Kohn’s invention could not function. Office Action at ¶16.

Applicant respectfully traverses this assertion. “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). MPEP 2131. The Office Action indicates that the system in Kohn “could not function” without an annotation related to “intention of operation.” The citations within Kohn provided by the Office Action do not disclose annotating a recipe with “a desired intention for action.” The system in Kohn includes components “whose logical (set-

based) and evolution (continuum-based) behaviors are controlled by a collection of agents.”

Kohn at column 1, lines 11-15. One agent in the system of Kohn is illustrated in Figure 2. As described, “[a] single agent 20 consists of six components: Knowledge-base Builder 22 (which supports manual input from users), Planner 24, Inferencer 26, Knowledge Base 28, Adapter 30, and Knowledge Decoder 32 (which supports automatic input from other agents).” Kohn at column 18, lines 43-47. Furthermore, “[t]he Planner 24 generates a statement representing the desired behavior of the system as an existentially quantified logic expression herein referred to as the behavior statement.” Kohn at column 18, lines 57-59. Accordingly, while the Planner 24 generates a statement representing the desired behavior of the system, there is no disclosure by Kohn that the Planner 24 (or other component of one of the agents in the system of Kohn) regarding annotating an action for a recipe with an intention for such an action.

Moreover, the Office Action seems to indicate that this limitation is inherent within Kohn, stating that the system in Kohn “could not function” without providing such an annotation. Office Action at ¶6. Applicant respectfully traverses this assertion.

“The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993).” (emphasis added) MPEP 2112. “In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.” *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). (emphasis added). MPEP 2112.

The statement by the Office Action that the system in Kohn “could not function” without providing such an annotation is conclusory, absent of any reason for such a conclusion. Applicant, therefore, respectfully requests a citation within Kohn that expressly describes an annotation of an action for a recipe with a desired intention for the action or a basis in fact or technical reasoning to support the determination that such an annotation necessarily flows from the teaching of Kohn. Accordingly, in the absence of a citation within Kohn providing an express description or a technical reason for the argument for inherency, Applicant respectfully requests allowance of claim 1.

With regard to claim 3, among the differences, claim 3 recites “generating through computer automated operations a recipe comprising a set of actions and the purpose of the underlying process.” (emphasis added). In the “Response to Arguments” section, the Office Action indicated that “[o]ptimal performance (as recited for the system in Kohn) is equivalent to fully encapsulating ‘the purpose of the underlying process.’” Office Action at ¶16. Accordingly, the Office Action relies on inherency based on Kohn to anticipate this limitation, as no express disclosure of this limitation within Kohn is cited by the Office Action. Applicant respectfully traverses this assertion. In particular, Applicant respectfully traverses that it is NOT inherent that a control system (based on logical and evolution behaviors) that claims to desire “optimal performance” will necessarily include a recipe that comprises the purpose of the underlying process.

Applicant, therefore, respectfully requests a citation within Kohn that expressly describes a recipe that includes the purpose of the underlying process or a basis in fact or technical reasoning to support the determination that such an annotation necessarily flows from the teaching of Kohn. Accordingly, in the absence of a citation within Kohn providing an express description or a technical reason for the argument for inherency, Applicant respectfully requests allowance of claim 3.

With regard to claim 6, Applicant has amended such claim to include the limitations of claim 8. Among the differences, claim 6, as amended, recites “modifying a recipe for a batch processing situation using the data stored in the knowledge repository, wherein the recipe contains steps and purposes.” (emphasis added). With regard to the underlined limitation, the Office Action rejected such limitation while rejecting claim 8. In particular, the “Response to Arguments” section, the Office Action alleges that “one cannot achieve optima performance without steps and purposes.” Office Action at ¶16. Accordingly, the Office Action relies on inherency based on Kohn to anticipate this limitation, as no express disclosure of this limitation (a recipe that contains purposes in addition to steps) within Kohn is cited by the Office Action. Applicant respectfully traverses this assertion. In particular, Applicant respectfully traverses that it is NOT inherent that a control system (based on logical and evolution behaviors) that claims to desire “optimal performance” will necessarily include a recipe that contains purposes.

Applicant, therefore, respectfully requests a citation within Kohn that expressly describes a recipe that includes purposes or a basis in fact or technical reasoning to support the determination that such an annotation necessarily flows from the teaching of Kohn. Accordingly, in the absence of a citation within Kohn providing an express description or a technical reason for the argument for inherency, Applicant respectfully requests allowance of claim 6.

With regard to claim 9, among the differences, claim 9, as amended, recites “a Structured Knowledge Repository to store and organize the knowledge, wherein the Structured Knowledge Repository organizes knowledge and provides links between specific pieces of information and the functional purposes to which the knowledge can be put.” (emphasis added). In light of the remarks set forth above, regarding claim 3, Applicant respectfully submits that the rejection of claim 9 has been overcome and that this claim is in condition for allowance.

With regard to claim 23, among the differences, claim 23 recites “generating an advanced recipe comprising a set of actions and the purpose of the underlying process.” (emphasis added).

In the “Response to Arguments” section, the Office Action indicated that “[t]o one of ordinary skill in the art, agents operating in an intelligent real-time control of distributed nonlinear processes will generate actions that have the purpose of achieving optimal performance (Kohn, col. 4, lines 57-67; col. 5, lines 1-3).” Office Action at ¶16. Accordingly, the Office Action relies on inherency based on Kohn to anticipate this limitation, as no express disclosure of this limitation (a recipe that comprises the purpose of the underlying process) within Kohn is cited by the Office Action. Applicant respectfully traverses this assertion. In particular, Applicant respectfully traverses that it is NOT inherent that a control system (based on logical and evolution behaviors) that claims to desire “optimal performance” will necessarily include a recipe that comprises the purpose of the underlying process.

Applicant, therefore, respectfully requests a citation within Kohn that expressly describes a recipe that includes the purpose of the underlying process or a basis in fact or technical reasoning to support the determination that such an annotation necessarily flows from the teaching of Kohn. Accordingly, in the absence of a citation within Kohn providing an express description or a technical reason for the argument for inherency, Applicant respectfully requests allowance of claim 23.

Claims 2, 4-5, 7-8, 10-22 and 24 depend from and further define claims 1, 3, 9 and 23, respectively and are patentable over Kohn for the reasons set forth above, plus the elements in the claims.

As set forth in the prior response to the Office Action mailed on April 11, 2002, in addition, the Office Action indicates that claim 18 is rejected under 35 USC 102; however, the Office Action fails to give specific reasons for the rejection of claim 18. Furthermore, the Office Action acknowledges that Kohn does not teach abstraction-decomposition space techniques. Applicant assumes that the inclusion of claim 18 in the list of claims rejected under 35 USC 102 is merely a typo.

§103 Rejection of the Claims

Claim 18 was rejected under 35 USC § 103(a) as being unpatentable over Kohn et al. in view of the Applicant's specification. In the "Response to Arguments" section, the Office Action indicated that the rejection from the "First Office Action" still applies. In particular, the Office Action stated that "[t]o one of ordinary skill in the art such as an engineer that is accustomed to solving problems, the combination of Kohn with APA is not elusive [and] [f]or sure, artificial intelligence is cognitive work." Office Action at ¶16.

Applicant traverses this rejection. As set forth in the prior response to the Office Action mailed on April 11, 2002, "[t]he Office Action must provide specific, objective evidence of record for a finding of a suggestion or motivation to combine reference teachings and must explain the reasoning by which the evidence is deemed to support such a finding. *In re Sang Su Lee*, 277 F.3d 1338, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002). Applicant respectfully submits that the remarks in the "Response to Arguments" section are conclusory such that the Office Action has not provided objective evidence for a suggestion or motivation to combine Kohn with the Applicant's specification (which is referred to by the Office Action as APA). Therefore, Applicant respectfully submits that the Office Action did not make out a *prima facie* case of obviousness for claim 18.

Filing Date: April 14, 2000

Title: ADVANCED RECIPE - A KNOWLEDGE BASED INFORMATION SYSTEM FOR PRODUCTION PROCESSES

New Claims

Applicant has added new claims 25-28 and respectfully submits that no new matter has been added. For at least the reasons set forth above, Applicant respectfully submits that claims 25-28 are in condition for allowance.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at 612-349-9592 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

ANOOP K. MATHUR ET AL.

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938
Minneapolis, MN 55402
612-349-9592

Date March 13, 2003

By Ann M. McCrackin

Ann M. McCrackin

Reg. No. 42,858

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Box AF, Commissioner of Patents, Washington, D.C. 20231, on this 13 day of March, 2003

Tina Kohout

Name

Z. H. J.

Signature